



PLUCK



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1 Welcome to MOSAIC PLUCK!

MOSAIC PLUCK continues the mission of The Mosaic Series: empowering composers to create dynamic, cinematic textures from a palette of inspiring sound sources.

A passion project of the Heavyocity team, The Mosaic Series is a line of virtual instruments built around what we find inspiring about a specific musical element - and this time, the focus is on plucked sounds.

Combining vintage synth, organic attack layers, and a range of sampled instruments (including plucked strings, harps, processed chimes, and thumb pianos), MOSAIC PLUCK delivers all the dynamic plucked sources you'll need to cut through even the densest of score mixes. Plucks have the unique ability of infusing a scene with instant tension and drastic mood shifts, and MOSAIC PLUCK is your essential toolkit for elevating conventional plucked timbres into gripping, cinematic moments.

1.1 System Requirements

MOSAIC PLUCK requires Native Instruments KONTAKT or KONTAKT PLAYER (version 6.5.2 or later).

1.2 Library Information

- 1.9 GB on disc (3.31 GB uncompressed sample content)
- 128 Snapshots
- 107 Different Sources (1984 Individual Samples)
 - 30 Synthetic
 - 24 Organic
 - 30 Reverses
 - 23 Attack Layers

2 Using the Instruments

All of the instruments in the MOSAIC series use the same engine and controls. For this manual MOSAIC KEYS is used as the example instrument, but the controls will operate the same for any MOSAIC instrument.

2.1 Navigation and Anatomy



The Main Interface for MOSAIC KEYS

There are 6 main pages of controls for the MOSAIC instrument, which are accessed via the buttons at the top of the interface (below the KONTAKT instrument header).

In the center of 3 of the main pages is the **Macro Control**, a powerful tool adapted from the NOVO series of instruments. You can find this control in the **MIXER** Page, **CONTROL** Page, and **MACRO SEQ** Page. This control is the main hub for quick sound manipulation and will be explained in section 2.2 Macro Control.

At the bottom of every page (except the **MIXER** page) is a compact version of the mixer, the controls for which are explained in section 2.4.1 Compact Mixer.

2.2 Macro Control

The Macro Control system is a very power tool for controlling the MOSAIC series of instruments.



The Main Macro Controls

The central Macro Knob moves the six Macro Sliders, each of which controls the parameters of their category. The range and direction can be individually defined for each slider.

The Macro Knob can also be modulated to create an evolving sound. The details of the macro modulation can be found in chapter 2.3 Macro Modulation.

The six Macro categories are triplicated for each channel, giving a total of 18 sets of controls, which adds up to a lot of parameters. The Macro system gives you easy access to this depth of control, but you still also have the ability to dig into the instrument and define these parameters and the Macro settings yourself.

Each Snapshot provided with the MOSAIC instrument will utilize the Macro system in some way. If you load a Snapshot you like, but want to reduce the Macro Knob's control of the Drive effects, then it is a simple case of pulling down the Drive range.

Each of the six Macro categories has four main controls:

- **Display** – clicking on the category name will display the control page for that category in the lower section of the instrument.
- **Power Switch** – the power switch at the end of the slider can toggle Macro control of the category on or off.
- **Range** – clicking and dragging on the outer bracket allows you to define the range of control the Macro Knob has over the category.
- **Invert** – inverts the direction of the slider.

The control pages for the Macro categories will be described in detail in the later sub-sections of the manual.

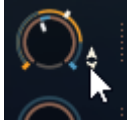
Assigning Modulation

Any knob that can be controlled by the Macro system is easily identified by a range halo on the outside of the knob, and a pair of arrows to the lower right of the knob.



A Macro-Enabled Control

- Click and drag on the arrows to define the Macro control range for the knob.



The indicator on the range bar will show the current value of the parameter.

Common Controls

Each macro page is divided into three, with a set of controls for each channel.

The header for each channel in each page will have the same controls.



Channel and Link Buttons

Clicking on the **LINK** (chain link icon) button will link all of the channels allowing you to control them as one. The settings of the channel with link active will override the other channels, but if you unlink the channels they will all return to their original settings.

There are also **COPY** and **PASTE** options, so you can copy the settings from one channel to another, without the need to link all three.

In some cases there will be a **POWER** button that will turn the effect on or off. Note that this is not always available.

2.2.1 Envelope

► Clicking on the **ENV** tab will display the Envelope controls.



The Envelope Page

Each channel has an ADSR envelope as well as additional channel controls that are found on this page. Note that only the ADSR controls can be modulated by the Macro system.

The main Envelope controls are:

- **ATK** – sets the attack (fade-in) time.
- **DEC** – sets the decay time, i.e. the time it takes for the volume to drop from maximum to the sustain level.
- **SUS** – sets the sustain level.
- **REL** – sets the release (fade-out) time, i.e. the time it takes for the envelope to drop to silence after you release a note.

The additional channel controls are:

- **SYNC** – when active, this synchronizes the **ATTACK** time with the host tempo.
- **START** – sets the sample start offset.
- **RND** – sets the randomization amount of the sample start offset.
- **WIDTH** – sets the stereo width of the channel.

2.2.2 EQ

Each channel has a 3-band parametric EQ

► Clicking on the **EQ** tab will display the EQ controls.



The EQ Page

Each band of the EQ has the same three controls:

- **GAIN** – sets the gain for the band.
- **FREQ** – sets the central frequency of the band.
- **Q** – sets the width of the band.

The **GAIN** and **FREQ** controls can be modulated with the Macro system.

2.2.3 Filter

► Clicking on the **FILTER** tab will display the filter controls.



The Filter Page

The filter has the following main controls:

- **ON/OFF** – the power switch at the top turns the filter on or off.
- **FILTER TYPE** – the menu below the power switch is where you can select a filter type.
- **CUT** – controls the cutoff frequency of the filter.
- **RES** – controls the resonant peak at the cutoff frequency.

The **CUT** and **RES** controls can be modulated with the Macro system.

Below the main controls are the filter envelope controls:

- **ENV** – *Envelope Amount* : sets the how much the filter envelope will modulate the filter cutoff.
- **ATT** – sets the attack time (fade-in time) of the filter envelope.
- **DEC** – sets the decay time (fade-out time) of the filter envelope.
- **SUS** – sets the sustain level of the filter envelope (i.e. the level at which the envelope will rest after the attack and decay phases).

Below the envelope are controls that allow you to define the filter modulation:

- **KEY** – *Key-Tracking* : sets how much the filter cutoff will track (i.e. follow) the key pitch.
- **VEL** – *Velocity Sensitivity* : sets how much the filter cutoff will be modulated by the key velocity.

2.2.4 Drive

► Clicking on the **DRIVE** tab will display the saturation and distortion controls.



The Drive Page

The drive page contains two effects: **SATURATION** and **DISTORTION**. Each effect has its own **POWER** button.

Saturation

The Saturation effect has three available modes which can be selected using the **TYPE** buttons. The three available saturation types are:

- **TUBE** – a vacuum tube style distortion.
- **TAPE 1** – a clean, modern tape saturation.
- **TAPE 2** – a warmer, vintage tape saturation.

Each of these saturation types is controlled by the same two parameters:

- **DRIVE** – sets the overdrive amount.
- **OUT** – sets the output volume level.

Distortion

The Distortion effect has three available modes which can be selected using the **TYPE** buttons. The three available distortion types are:

- **STOMP** – a stompbox style distortion.
- **AMP** – a guitar amplifier style distortion.
- **LO-FI** – a digital degradation effect.

When the distortion is set to **STOMP** or **AMP** the available parameters are as follows:

- **DRIVE** – sets the overdrive amount.
- **TONE** – controls the tone (i.e. high frequency level or harshness).

When the distortion is set to **LO-FI** the available parameters are:

- **BITS** – sets the bit depth of the signal.
- **S.RATE** – sets the sample rate of the signal.

2.2.5 Gate

► Clicking on the **GATE** tab will display the gate controls.



The Gate Page

The Gate modulates the output volume of the channel over time to create rhythmic effects.

Above the main sequence table are three main options for the gate effect:

- **PERF** – selects how the gate sequence should react to incoming MIDI. There are 4 options:
 - **Retrig** - the sequence will retrigger with every new MIDI note.
 - **Legato** - the sequence will retrigger with new MIDI notes, but not when played legato.
 - **Free Run** - the sequence will start running with the first MIDI note and then continue running freely from that point on. When used in a host this mode will sync to the host tempo and song position.
 - **One Shot** - similar to **Legato** mode, but the sequence does not loop and will stop when it reaches the end.
- **STEPS** – sets the number of steps in the sequence.
- **SHAPE** – loads a preset shape into the sequence. There are 6 options:
 - **Triangle** - the table will automatically be populated with a triangle shaped wave.
 - **Comb** - creates a comb pattern.
 - **Ramp Up** - the table will automatically be populated with a range of values that start at zero and end with the maximum value.
 - **Ramp Down** - the table will automatically be populated with a range of values that start at the maximum and end with zero.
 - **Clear** - sets the value of all steps in the pattern to their default value.
 - **Random** - randomizes the values of all steps in the pattern.

Below that is the main sequence pattern table.

- Click and drag on the table to create a volume sequence.



To the bottom right of the main sequence table are two arrow buttons that nudge the pattern one step to the left or right.

Below the main sequence table are the three modulatable playback parameters:

- **RATE** – sets the rate at which the sequence will play back.
- **SMOOTH** – sets the amount of smoothing between steps; in other words: how long it takes to change from one volume setting to another.
- **AMOUNT** – sets the range of the Gate effect. At 0% the Gate will have no influence on the output volume. At 100% the Gate will be able to set the volume to any settings from silence to full.

2.2.6 Space

- Clicking on the **SPACE** tab will display the delay and reverb controls.



The Space Page

The Space Page contains two effects: **DELAY** and **REVERB**. Each effect has its own **POWER** button.

Delay

The master delay has four controls:

- **TIME** - sets the time between the input signal and the delayed signal.
- **FBACK** - controls how much of the effect output is fed back into the effect input. In other words: this controls the number of repeating echoes.
- **WIDTH** - controls how much the echoes will ping-pong from the left channel to the right channel.
- **AMOUNT** - controls the volume of the delay signal.

Reverb

The space reverb is an algorithmic reverb with five controls:

- **SIZE** – changes the size (and thus also length) of the reverb.
- **HI DAMP** – controls the amount of high frequency absorption in the room.
- **LO DAMP** – controls the amount of low frequency absorption in the room.
- **MIX** – controls the dry/wet mix; i.e. crossfades between the input signal and the reverb signal.

2.3 Macro Modulation

Not only is the Macro Knob a powerful real-time performance tool, but it can be modulated using the built-in Macro Modulation Sequencer, making it a way to evolve your sound over time.

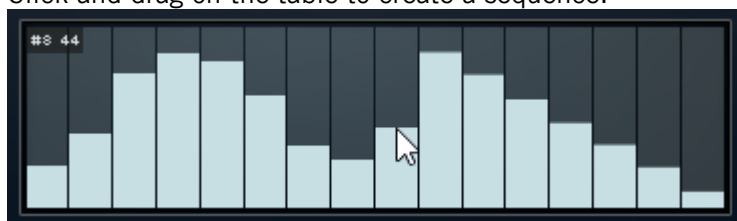
- To view the Macro Sequencer controls, click on the **MACRO SEQ** tab at the top right of the interface.



The Macro Sequencer Page

At the top of the Macro Sequencer page is an on/off switch which can toggle modulation on or off. In the center of the area is the main sequence pattern table.

- Click and drag on the table to create a sequence.



Above the main sequence table are the four playback parameters:

- **RATE** – sets the rate at which the sequence will play back.
- **STEPS** – sets the number of steps in the sequence.
- **PERF** – selects how the gate sequence should react to incoming MIDI. There are 4 options:
 - **Retrig** - the sequence will retrigger with every new MIDI note.
 - **Legato** - the sequence will retrigger with new MIDI notes, but not when played legato.
 - **Free Run** - the sequence will start running with the first MIDI note and then continue running freely from that point on. When used in a host this mode will sync to the host tempo and song position.
 - **One Shot** - similar to **Legato** mode, but the sequence does not loop and will stop when it reaches the end.
- **SHAPE** – loads a preset shape into the sequence. There are 6 options:
 - **Triangle** - the table will automatically be populated with a triangle shaped wave.
 - **Comb** - creates a comb pattern.
 - **Ramp Up** - the table will automatically be populated with a range of values that start at zero and end with the maximum value.
 - **Ramp Down** - the table will automatically be populated with a range of values that start at the maximum and end with zero.
 - **Clear** - sets the value of all steps in the pattern to their default value.
 - **Random** - randomizes the values of all steps in the pattern.

To the left and right of the table are addition parameter knobs:

- **SMOOTH** – sets the amount of smoothing between steps; in other words: how long it takes to change from one value to another.
- **RANGE** – sets the range of modulation. Note that this control is bipolar and can be set to both positive and negative values.

When the Macro Modulation is active and the range is set, the Macro Knob will display the range information and current value with the modulation applied on the inside ring of the control.

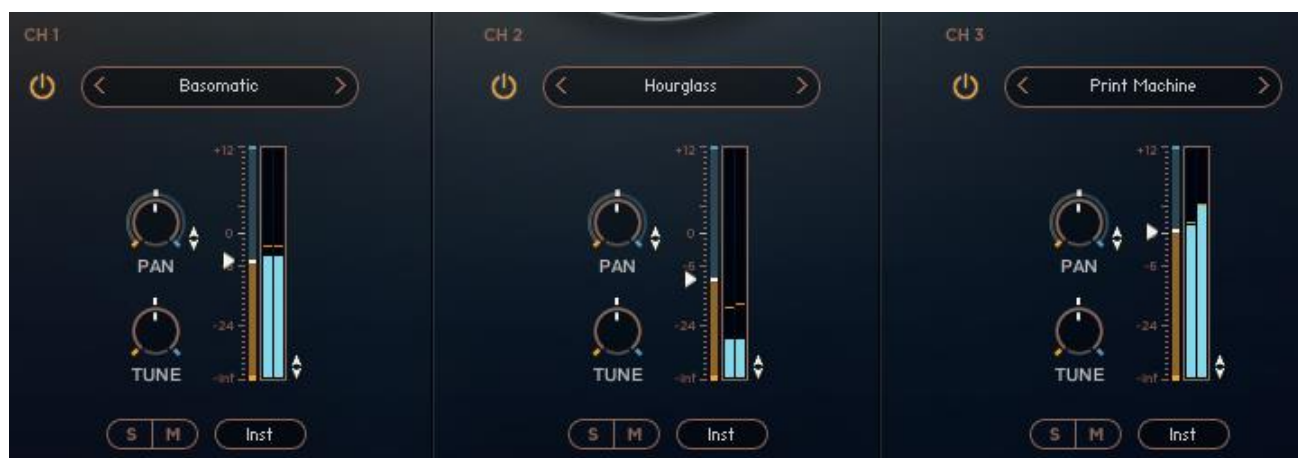


The Macro Knob Displaying the Modulation Range and the Current Value

2.4 Mixer

The MOSAIC instruments use three channels. All the controls for mixing these channels together are accessible on the Mixer page.

- If the Mixer is not displayed, you can view it by clicking on the **MIXER** navigation button to the top left of the interface.



The Mixer Page

Each channel has the same controls:

- **ON/OFF** – the power button purges (unloads) the selected channel from memory when switched to the off position. Use this only if you do not plan to use the selected channel in your project. Click this button again to reload the channel.
- **VOLUME** – the main slider controls the output volume of the channel.
- **PAN** – controls the stereo position of the channel.
- **TUNE** – sets the transposition amount for the channel.
- **SOLO** – the **S** button mutes all other channels so that only the soloed channel can be heard.
- **MUTE** – the **M** button mutes the channel so that it cannot be heard.
- **OUTPUT ROUTING** – from the menu you can select an alternate output for the channel (depending on your KONTAKT setup, this can allow you to route to multiple outputs in your DAW or soundcard). Note that setting the output to anything other than the **Inst** setting will cause the channel to bypass the Master Effects.

The **VOL** and **PAN** parameters for each channel can be modulated using the Macro system. For more information on this see section 2.2 Macro Control.

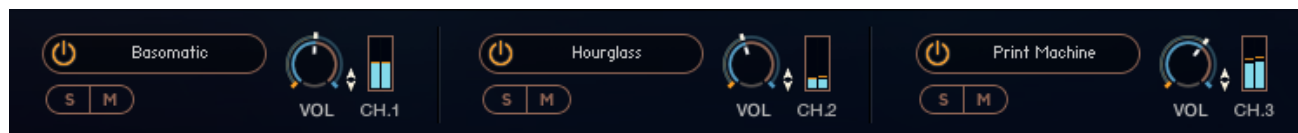
Sound and Bank Selection

The label of each channel is also the access point to the sound/bank selection.

- Clicking on the channel name opens the Options Page with the Sound Browser set to the selected channel. The Sound Browser is described in 2.6.1 Browsing and Loading Sounds.
- Clicking on the arrows to the left and right of the channel name will cycle through sound sources within the same category (changing categories is only possible in the Sound Browser).

2.4.1 Compact Mixer

At the bottom of the interface on every page except the Mixer page is a compact version of the Mixer. It operates the same, but has been resized and has fewer controls.



The Compact Mixer Controls

This compact version of the Mixer allows you to solo and mute channels while you adjust effects and parameters to design your sounds, as well as adjusting volume to compensate for any effects.

2.5 Master FX

- If the Master FX are not displayed, you can view them by clicking on the **MASTER FX** navigation button to the top right of the interface.



The Master FX

There are 5 master effects, all of which are applied to the final output of the instrument.

Punish

Of course, no Heavycity product would be complete without the trademark Punish Knob.



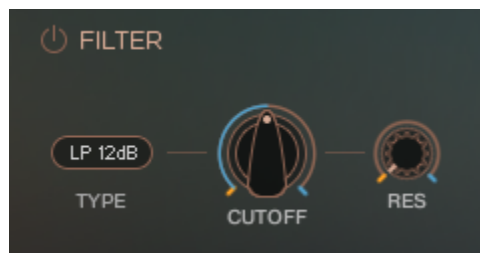
The Punish Knob

The Punish Knob is a single knob effect that uses a combination of compression and saturation to distress your sound. Simply turn the knob to punish the sound!

The power switch above the Punish Knob turns the effect on or off.

Filter

The master filter has three controls.



The Master Filter

These are (from left to right):

- **CUTOFF / TALK** – controls the cutoff frequency of the filter. If a **FORMANT** type filter is selected, then this controls the vowel.
- **TYPE** – use this menu to select the type of filter.
- **RES / SHARP** – sets the level of the resonant peak at the cutoff frequency. If a **FORMANT** type filter is selected, then this controls the sharpness of the formant.

Delay



The Master Delay

The master delay has four controls:

- **TIME** - sets the time between the input signal and the delayed signal.
- **FEEDBK** - controls how much of the effect output is fed back into the effect input. In other words: this controls the number of repeating echoes.
- **DAMP** - controls how much the echoes will darken over time as high frequencies are filtered out.
- **AMT** - controls the volume of the delay signal.

Master EQ

The master EQ is a 4 band EQ with shelving bands for the high and low frequencies, and two parametric bands for the mid frequencies.



The Master EQ

Each band has a **Gain** control for setting the level of the band.

The two mid bands have additional controls below the gain knobs:

- **Frequency** - sets the central frequency of the band.
- **Bandwidth (BW)** - sets the width of the band.

Reverb

The master reverb is a convolution reverb.



The Master Reverb

- The impulse response for the reverb is selected via the menu. Click on the reverb name to display this menu.

You can use the arrow buttons on either side of the menu to cycle through the impulse responses.

The additional reverb parameters are:

- **SIZE** – changes the size (and thus also length) of the reverb.
- **PRE-DEL** – sets the delay time between the input signal and the processed signal.
- **HI DAMP** – applies a filter to the high frequencies to darken the sound.
- **LO DAMP** – applies a filter to the low frequencies to remove resonating bass and clarify the signal, or to brighten the reverb.
- **MIX** – controls the dry/wet mix; i.e. crossfades between the input signal and the reverb signal.

2.6 Options

The Options page is where you can select which sample set is to be used by each channel, as well as setting certain performance options.

You can access the Options page in two different ways:

- Clicking on a channel label in the mixer will open the Options page with the Source Browser set to the selected channel.
- Clicking on the **OPTIONS** navigation button will open the Options page with the Source Browser set to the last selected channel.



The Options Page

The top section of the Options page is the Source Browser where you can browse, preview and load sample sets. The lower section is where you can define the key-ranges for the channels, as well as setting velocity and pitch bend ranges.

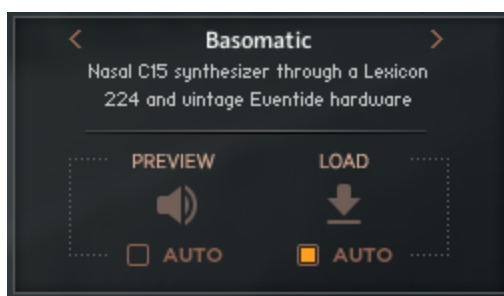
2.6.1 Browsing and Loading Sounds

You browse through sound sources by category using the table to the left of the Source Browser.



The Browser Table

When you select a source from the table, its details will be displayed in the info box on the right of the page.



Source Info

In the info box you can see details about the source, including a brief description of the sound.

Below the source information are six buttons, which are (from left to right):

- **PREVIOUS / NEXT** – you can use the arrows beside the source name to browse through sounds in the selected category.
- **PREVIEW** – plays a short preview of the selected sound. Note that this preview is not processed by any effects, so the sound may change when loaded into an instrument with a lot of effects active.
- **AUTO** – when active, the preview button will automatically activate any time you select a sound in the browser.
- **LOAD** – click this button to load the selected sound into the selected channel.
- **AUTO** – when active, a sound will automatically load into the selected channel when is it selected in the browser.

2.6.2 Key Mapping

The Key Mapping controls are located at the bottom of both the Source Browser Page and the Options Page. These controls allow you to define the playable key range of each channel, as well as fades for the lower and higher sections of the ranges.



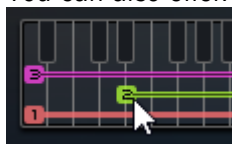
The Key Mapping Controls

Each channel has the same four controls:

- You set the lowest playable note using the **LOW** setting.
- You set the highest playable note using the **HIGH** setting.
- The knobs located beside each of these settings can be used to set the fade amount for the respective part of the key range.

When you use any of these controls, the key display will update to reflect any changes you make. The key display also highlights notes as you play them, so you can quickly see where the note you are playing relates to the defined key ranges.

- You can also click and drag the ranges on the key display to set the key ranges of the channels.

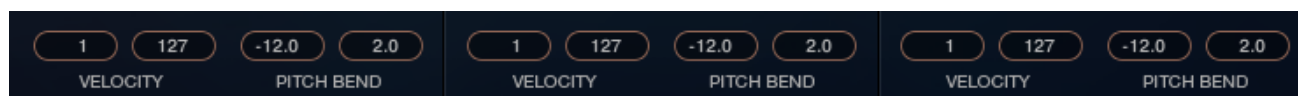


Channels can also be linked by using the **LINK** buttons.

Clicking on a **LINK** button will not automatically override the settings of a channel, but when you click on a parameter in either of the linked channels, that channels settings will be copied to the other channel.

Note that it is possible to link all three channels by activating both of the **LINK** buttons.

2.6.3 Channel Options



The Channel Options

Each channel has a set of options that influence how it reacts to MIDI, these are:

- **PITCH BEND** – these two controls allow you to define the range of pitch bend for both the **DOWN** and **UP** directions.
- **VELOCITY** – these two controls can be used to limit the velocity range of the channel, any velocities played lower than the **MIN** value will be set to that value, and any played higher than the **MAX** value will be set to that value.

2.7 Arpeggiator

An arpeggiator takes chords and breaks them into their individual notes, which it then plays back in a pattern. Each channel of the instrument has its own arpeggiator, a feature that allows you to make complex rhythms and patterns with ease.

- If the Arpeggiator is not displayed, you can view it by clicking on the **ARP** navigation button to the top right of the interface.



The Arpeggiator Page

Each channel of the arpeggiator has the same controls.

At the top are the main controls, similar to the controls found on the Macro sub-pages:

- The **LINK** (chain link icon) button will link all of the channels allowing you to control them as one. The settings of the channel with link active will override the other channels, but if you unlink the channels they will return to their original settings.
- The **COPY** and **PASTE** buttons allow you to copy the settings from one channel to another, without the need to link all three.
- The **POWER** button will turn the arpeggiator on or off.

Below these are the main playback parameters:

- **RATE** – sets the rate at which the arpeggiator will play back.
- **STEPS** – sets the number of steps in the sequence.
- **TYPE** – selects how the arpeggiator sequence should react to incoming MIDI. There are 4 options:
 - **Retrig** - the sequence will retrigger with every new MIDI note.
 - **Legato** - the sequence will retrigger with new MIDI notes, but not when played legato.
 - **Free Run** - the sequence will start running with the first MIDI note and then continue running freely from that point on. When used in a host this mode will sync to the host tempo and song position.
 - **One Shot** - similar to **Legato** mode, but the sequence does not loop and will stop when it reaches the end.

Below those are a row of buttons. These are the **TIE** buttons; activating one of these will tie the respective step to the next step. So the next step won't trigger, but the current step will be twice as long.

Next is the **Velocity Table**. By default the arpeggiator will use the played velocity when generating new notes, but the velocity table can be used to adjust the velocity for a given step, allowing you to create accents and ghost notes in the arpeggiator pattern.

Below the Velocity Table are the 4 playback parameters:

- **GATE** – sets the length of the generated notes as a percentage of the arpeggiator rate.
- **SWING** – applies swing to the arpeggiator rhythm.
- **ARP TYPE** – from this menu you can select the order in which the arpeggiator will generate notes:
 - **Chord** – the held chord will be played as is, without being broken into individual notes.
 - **Up** – the notes of the chord will be played from lowest to highest.
 - **Down** – the notes of the chord will be played from highest to lowest.
 - **Up/Down** – cycles between Up mode and Down mode, starting with Up.
 - **Down/Up** – cycles between Down mode and Up mode, starting with Down.
 - **Repeat (x2, x3, x4)** – similar to Up mode, but each note is repeated.
 - **Random** – the notes of the chord are played in a random order.
- **OCTAVE** – this menu allows you to add additional octaves of notes to the arpeggiator. If you select **+1 oct.** from the menu, the arpeggiator will play through the held notes as well as then the same notes one octave higher

At the bottom of the arpeggiator controls you will find the **CHORD** buttons. Activating one of these for a step will temporarily set the arpeggiator to **Chord** mode for the respective step. Note that when the arpeggiator is already in **Chord** mode, these buttons will have no effect.

3 Credits

Product Concept and Design: Heavyocity Media & Tobias Menguser

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KONTAKT Scripting & Additional Functionality Design: Adam Hanley

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